



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, DC 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/709,930	09/09/96	GREEN P	000287-00482

020350 19M1/1204  
TOWNSEND AND TOWNSEND AND CREW  
TWO EMBARCADERO CENTER EIGHTH FLOOR  
SAN FRANCISCO CA 94111

EXAMINER
LEE, R

ART UNIT	PAPER NUMBER
1941	12

DATE MAILED: 12/04/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
08/709,930

Applicant(s)  
Philip S. Green

Examiner  
Richard Lee

Group Art Unit  
1941



☒ Responsive to communication(s) filed on Sep 18, 1998

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 46-105 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 46-105 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 9

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1941

1. It is noted that the applicant has failed to address paragraph (1) of the last Office Action (see Paper no. 8).
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

3. Claims 46-57, 69, 71, 72, 77-84, 87-92, 96, 97, 104, and 105 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilk of record (5,217,003).

Wilk discloses an automated surgical system and apparatus as shown in the figure, and the same minimally invasive surgical method and method for performing surgery on an anatomy of a person as claimed in claims 46-57, 69, 71, 72, 77-84, 87-92, 96, 97, 104, and 105 comprising the same providing a control assembly coupled to a surgical assembly comprising a surgical instrument including a forearm member (i.e., the member 20 extended up from element 21 of figure) having a distal forearm end, a wrist member (see 21 of figure) pivotally connected to the distal forearm member in a manner as to be capable of being pivoted about a first axis, and an end effector member movably coupled to the wrist member in a manner as to be capable of being moved about a second axis that is generally perpendicular to the first axis (see figure and column 2); inserting the surgical instrument of the surgical assembly into an anatomy of a person until the end effector member reaches an internal surgical site within the anatomy of the person (see

Art Unit: 1941

figure); pivoting manually a wrist-pivoting element of the control assembly to cause the wrist member to pivot correspondingly about the distal forearm end and along the first axis (see column 2); moving manually an end effector-controlling member to move about the second axis and perform a surgical procedure at the internal surgical site within the anatomy of the person (see column 2); axially, rotatably, and pivoting moving manually a forearm control element of the control assembly to cause the forearm member to axially, rotatably, and pivotably move, respectively, correspondingly along a longitudinal forearm axis of the forearm member (see 24 of the figure); inserting, prior to the moving step, an endoscope into the anatomy of the person such that the endoscope is oriented toward the end effector member, and displaying an image of the end effector member for viewing by an eye of an operator (see column 2); wherein the control assembly comprises a computer and a control coordinate system, and the internal surgical site includes a surgical coordinate system (see 44 of figure); wherein a field of view of the endoscope is at a first angle relative to vertical , and wherein a field of view of the eye of the operator is at a second angle relative to vertical which is different than the first angle (see figure and column 3); maintaining gas insufflation pressure within the internal surgical site (see column 1, line 67 to column 2, line 2); the end effector member comprises a structure selected from the group consisting of retractors, electrosurgical cutters, electrosurgical coagulators, forceps, needle holders, scissors, blades, and irrigators (see 21 of figure); displaying an image of the surgical end effector at the internal surgical site for viewing by an eye of an operator at a control station, and moving manually by the operator a surgical control handle of the control station to cause the

Art Unit: 1941

surgical end effector to move and perform a surgical procedure at the internal surgical site within the anatomy of the person (see columns 1-3); and pivoting manually by the operator a wrist-pivoting handle of the control station to cause the wrist member to pivot on the forearm (see columns 2-3).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 58-68, 70, 85, 86, 93-95, 98, and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilk as applied to claims 46-57, 69, 71, 72, 77-84, 87-92, 96, 97, 104, and 105 in the above paragraph (3), and further in view of "Another Pair of Hands for Surgeon?" from Perspective magazine of record (hereinafter referred to as "Perspective") for the same reasons as set forth in paragraph (7) of the last Office Action (see Paper no. 8).

6. Claims 73, 75, 100, and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilk as applied to claims 46-57, 69, 71, 72, 77-84, 87-92, 96, 97, 104, and 105 in the above paragraph (3), and further in view of "Telesurgery may bridge future gaps" by Richter of record (hereinafter referred to as Richter) for the same reasons as set forth in paragraph (8) of the last Office Action (see Paper no. 8).

Art Unit: 1941

7. Claims 74, 76, 101, and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Wilk and Perspective as applied to claims 46-72, 77-99, 104, and 105 in the above paragraphs (3) and (5), and further in view of "Telesurgery may bridge future gaps" by Richter of record (hereinafter referred to as Richter) for the same reasons as set forth in paragraph (9) of the last Office Action (see Paper no. 8).

8. With respect to the applicant's arguments at pages 4-5 of the amendment filed September 18, 1998 concerning the citation of Kalman v. Kimberly-Clark Corp. on the anticipation of claims, and specifically that "... Wilk does not anticipate the claimed methods of independent claims 46, 77, 104, and 105 particularly because every element and/or process step or act of independent claims 46, 77, 104 and 105 is not identically shown in Wilk, as demanded by In re Bond, supra ... Wilk does not teach or suggest inter alia a surgical instrument comprising a forearm member ... a wrist member pivotally connected to a distal forearm member, and an end effector member movable coupled to the wrist member. Wilk does not teach or disclose a wrist member, only a forceps instrument 20 slidably passing through the cannula 24 and having a pair of forceps jaws 21 secured at an end thereof. More specifically, Wilk does not teach or disclose a wrist member pivotally secured to the forceps instrument.", the Examiner respectfully disagrees. It is the Examiner's opinion that the member 20 extending up from element 21 of Wilk is the same as the forearm member as claimed. In addition, it is the Examiner's opinion that element 21 is the same as the wrist member as claimed. Though elements 20 and 21 of Wilk may be defined as forceps instruments and forceps jaws, respectively, these respective elements perform the same functions

Art Unit: 1941

as that of the forearm and wrist members as claimed. Contrary to the applicant's statements, it is the Examiner's opinion that the wrist member 21 of Wilk is pivotally secured to the forceps instrument. If the wrist member 21 of Wilk is not pivotally secured, then how can surgery be performed in the surgical system as shown in the figure of Wilk. As such, it is the Examiner's further opinion that the claimed limitations are rendered anticipated by Wilk.

With respect to the applicant's arguments at pages 5-6 of the amendment filed September 18, 1998 concerning that "Wilk also does not teach or suggest inter alia pivoting manually a wrist-pivoting element of the control assembly to cause the wrist member to pivot correspondingly about the distal forearm end of the forearm member. The input device 50 in Wilk is taught as having a joy stick 60 for controlling the operation of the 2-axis rotary device 24 which pivots the cannula 14 in two possible directions, a knob 62 for controlling the rotation of the forceps instruments 20 by the rotary drive 28, a slide switch for controlling translatory movement of the forceps instruments 20 by the translatory drive 26, and another slide switch 66 for controlling actuation of the forceps jaws 21 by the instrument activator 30. None of the foregoing control instruments cause a wrist to pivot about the distal end of the forceps instruments 20 ...", the Examiner disagrees. Wilk clearly teaches that the forceps jaws, i.e. wrist member 21, is controlled by a computer 22 via a two-axis rotary drive 24 and a translatory drive 26, and that rotary drive is operatively connected to tube 14 for pivoting the tube at its point of penetration, i.e. the pivotal point of wrist member 21, through the abdominal wall (see column 2, lines 48-61). In addition, in order for the surgical operation to be performed it is inherent that the

Art Unit: 1941

forceps jaws 21 must have the capabilities as that of a wrist member for maneuvering within the anatomy of a person. Hence, control instruments 22, 24, and 26 provides the same control to cause wrist member 21 to pivot about the distal end of the forceps instruments 20. It is therefore the Examiner's opinion that the claimed limitations are rendered anticipated in view of Wilk.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

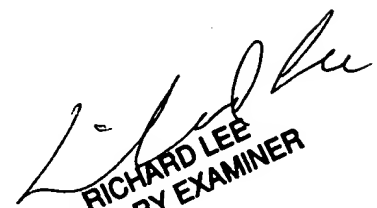
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



Art Unit: 1941

10. Any inquiry concerning this communication or earlier communications from the Adjudicator should be directed to Richard Lee, whose telephone number is (703) 308-6612.

If attempts to reach the Adjudicator by telephone are unsuccessful, the Adjudicator's supervisor, Angela Sykes, can be reached at (703) 306-3484 and the Patent Analyst, Michelle Mosley can be reached at (703) 306-3494. The fax phone number for this Group is (703) 308-4363.

  
RICHARD LEE  
PRIMARY EXAMINER

MM  
R/L

December 1, 1998

